

MBtiles & Other Formats

OpenCPN supports the use of MBtiles (v5.0.0).

Related Plugins

- [VentureFuther Kap Files](#)
- [Weatherfax_pi Kap Files](#)
- [Photolayer Geotiff Files](#)

What are Kap and MBtiles?

From svocelot: [Making mbTiles](#)

Sat2Chart can make either KAPs or mbTiles. KAPs are a MapMedia format that's been around for years, and we've been using them since 2015. MbTiles are a newer database based format for storing map-tiles. KAPs are limited to 128 separate colors, much like the old CompuServe GIFs. This turns out to be important when scrutinizing a coastline looking for minute differences in the shade of blue that might show an anchorage. MbTiles don't have a color limit, so the color quality is much better. And mbTiles have other advantages...

KAPs are essentially a single picture, taken from whatever altitude you choose. For OpenCPN to display this image at a different altitude (zoom level) it has to decide which pixels to keep and which to throw out. This can put a huge strain on its display engine, especially when panning around with many KAPs displayed. So much so that we typically switch to our CM93 charts when we want to pan to somewhere else, and then switch back to our KAPs only when we're displaying our new area of interest.

MbTiles, on the other hand, can have multiple zoom levels stored in the single file. This makes it easy for OpenCPN, as all it has to do is extract the correct zoom level from the mbTile and slam it out to the display engine. We find panning with mbTiles displayed is slightly slower than with our CM93 charts, but not badly so, and we're quite happy moving around with mbTiles displayed.

How are MBtiles made?

- [Making MBTiles](#)

How can OpenCPN use them effectively with Charts?

- [Use of Chart Groups and Chart files](#)
- MBtile or Kap missing or hidden?: Zoom into the area of the tiles, they will appear. MBtiles and Kaps only show at certain scales, similar to charts. (You can also make mbtiles at different scales

similar to charts).

Satellite Images

- [WxFax Satellite Overlay](#) Sat Kaps using Weather_fax Wizard.

Tools & Instructions

- [Sat2Chart.V8.0.1.0 improved Google Earth to MBtiles support](#). [Paul Higgins Website](#) Creates charts from GE and chart images and SasPlanet. Can overlay opencpn chart and chart images including GeoTiff. New: Improved GE mbtiles support. CF threads about [GE2KAP](#) and [Sat2Chart](#)
- [Chart Conversion Programs](#) ImgKap, Google Earth, BSB, etc]]
- [Use of Kap files](#), [Jon Hacking](#) This is a great instruction page.
- [Making mbTiles](#), [Jon Hacking](#) More good instruction.

Navigational Kap Downloads

These are great MBtile Resources and we encourage others to add their mbtile downloads.

- [MBtile Downloads](#) Excellent organized resource covering similar areas as the Navigational KAP files below. Ocelot
- [Navigational KAPs](#) Ocelot
 - Japan, Maldives, Solomans, PNG, Palu, Micronesia, Indonesia, Phillipines, Malaysia, Singapore, Thailand, Maldives, BIOT
 - Navigational KAPS are navigational files in a MapMedia format that is usable by most navigation programs, like OpenCPN or MaxSea or Capt'n Navigator. These files have been made from Google Earth, typically at 7,200 feet (2200m) elevation, to get all the detail possible. Jon Hacking.
- [The Chartlocker for MBTiles](#) Bruce Balan
 - Charts and website created by Bruce Balan & Alene D. Rice on s/v Migration.
 - Download Zip files of Country/Region and Areas around the world.
- [Satellite MBtiles](#) Soggy Paws
 - Red Sea, Papua New Guinea, Solomon Islands, Philippines and Eastern Indonesia, Micronesia (west of Marshalls, including Palau), Marshall Islands, Between Fiji and the Marshall Islands, Fiji, Tonga, Cook Islands, Society, San Blas
 - Also good Links to other GE Charts Sets at the bottom
 - [Zen Again's Charts](#) Pacific Ocean, SE Asia, Crossing to S Africa, S Atlantic, Brazil
 - [Valhalla's Charts-Terry's Topics](#) SE Asia and Western Pacific
 - [Ocelot's Charts-Jon Hacking](#) SE Asia, Western Pacific, and Indian Ocean
 - [Migration's Charts-Bruce Balan](#) Pacific Mexico, French Poly, Pitcairn Island, Easter Island mbtiles 2020
 - [Jacaranda's Charts-Houlihans](#) French Polynesia
 - SoggyPaws -Sherry McCampbell "WHY you want/need Satellite charts":

- [SSCA Presentation on Navigation Alternatives](#)
- The charts aren't always right! The crew does not always have the right position.

User Guides Kap Overlay Files

[SV Matilda - Using Kap Overlay Files](#)

From:

<https://opencpn.org/wiki/dokuwiki/> - **OpenCPN Manuals**

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